White Paper

Grant: HD-248622-16

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Presented by

The Search for Harmony
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ABSTRACT:
The Search for Harmony is an original web-based game about the rich, forgotten historical legacy of classical musicians of African descent. This concept provides content for this grant project's primary task – the pairing of an HTML game development framework with the content management system WordPress, to create a plugin that allows creators with little or no code knowledge to produce similar types of educational games using a system more ubiquitous in the humanities than game engines such as Unity, and thus create games with a lower burden on resources. Though the original project scope was to create one type of game (searching a two-dimensional space for objects), the project evolved during the grant phase to lay foundations for multiple types of minigames to be customized, and provide groundwork for platform growth as additional minigame options are added to the environment. This tool can empower educators, students, and others in the humanities to use games as a means of creating engaging, informative experiences and expressions.

PROJECT ACTIVITIES:
During early stages of the grant phase, Stone Soup Productions met with advisors and core constituencies to both evaluate the efficacy of the WordPress plugin model to produce games, and to identify detailed needs of each constituency to help guide design and development choices. The project's two primary advisors for game development and impact assessment were Benjamin Stokes and Lindsay Grace of American University. The four core constituencies included:

1. **BUMP: The Triangle**, a Durham, North Carolina based organization that fosters urban youth empowerment through African Diasporic music
2. **The Sphinx Organization,** a Detroit, Michigan based organization that instructs and inspires diversity in the arts
3. **The Phoenix School,** a Salem, Massachusetts based school whose students provided valuable insight throughout the grant phase
4. **Individual students** in our targeted demographic, who would visit the development office and test the game at various stages

Initial meetings with project advisors led to revision of the core concept to provide more flexibility for game creators. The original approach for the WordPress plugin was to create one type of game that could then be reused across multiple 'levels,' allowing an instructor to create multiple versions of the same game mechanic, each focusing on a different concept related to their specific educational discipline. While this game format consistency

required less training on the part of the creator, the limited option for game mechanic could have enforced a limitation on engagement, as all games created with the plugin would retain similar gameplay. The project transitioned instead to a modular approach, where a variety of slightly less-complex games could be chosen and remixed, allowing the games to be more unique, and also providing a greater variety of options for educators to choose the game mechanic that best fits their subjects, and not use other mechanics that may not be as useful. For example, a search-the-map level may be well-suited for discovering dinosaurs, where a running/jumping platformer would be less appropriate; the opposite may be true for a lesson in electoral politics, where the pacing of a running/jumping platformer would better suit the content.

Another goal of the early grant phase was to audit and select an HTML5/Javascript game engine that could successfully pair with WordPress' content management style. The engine needed to be open-source, have sufficient documentation for game development (both for our purposes and for future users), and an active community surrounding the engine, increasing the likelihood of long-term support of the codebase. Phaser.js provided the greatest balance between these criteria and was thus used as the engine powering the minigames in the plugin.

Following standard conventions for building web projects integrated with content management systems, a static game was produced incorporating several possible minigame candidates for plugin integration, and allowing for experimentation with the delivery of humanities content during interaction.

This effort resulted in *The Search for Harmony,* which explores the history of George Polgreen Bridgetower, and Afro-European violin prodigy who collaborated with Beethoven for a time, but has since largely been relegated to historical obscurity. The game includes a title screen, overview map and five access points to trigger the following minigames.
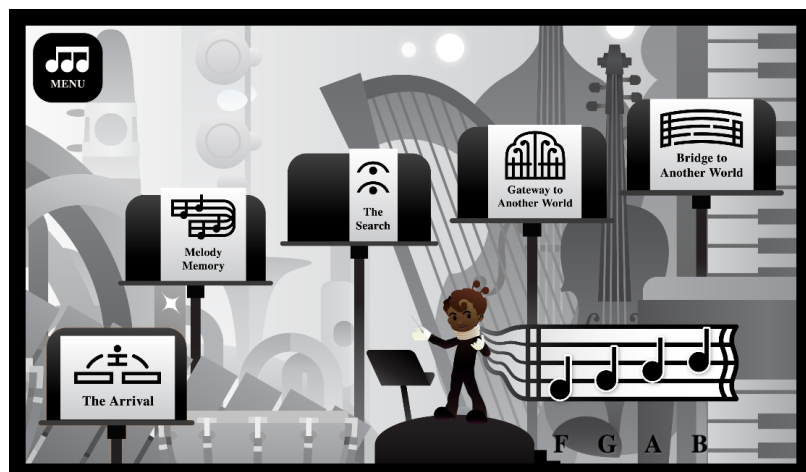
The narrative structure surrounding this test case introduces the protagonist Maestro, who is searching for his friend Harmony and traveling through different points in history to do

so. This travel is how humanities content is framed when presented to the player. Minigame candidates produced for this test case include:

1. **The Arrival:** A Bridge Runner-type format where a character constantly runs across the screen and must jump on platforms and collect objects to complete the level; this level introduces the world of Bridgetower to the player as he or she runs by famous landmarks of the violinist's life, including the Esterhazy Palace, where he grew up and was trained by the composer Haydn, and Drury Lane, where he performed in front of British royalty at age 10, among others.

2. **Melody Memory:** A memory game where players press buttons representing music notes to recreate compositions. In this application the music was Beethoven's Sonata No. 9, otherwise known as *The Kreutzer Sonata*, a piece that had been premiered by Bridgetower and at one point dedicated to him before he and Beethoven had a falling out.

3. **The Search:** Players can move components of the menu around to find objects, using a find-and-search mechanic to introduce basics of music composition, such as the difference between a sharp, flat and natural symbol in music.

4. **Gateway to Another World:** An open-ended level where players can complete either an in-class task or some external assignment to receive a numeric code they use to open the gate. In *The Search for Harmony*, the players are prompted to do external research to answer a historical question about Bridgetower, at which point they receive a code to unlock the gate. An alternative would be a lesson or classroom assignment guided by a teacher who would give the code upon the successful completion of the assignment.

5. **Bridge to Another World:** Players must tap or press keys at specific points in time to acquire points, in a style similar to the commercial game Guitar Hero. If enough points are acquired the level is won - if not, it is restarted. *The Search for Harmony* utilizes this minigame to showcase the difficulty of Beethoven's Sonata No. 9, which Bridgetower had triumphantly performed, and to teach the player about why Bridgetower's rightful place in music history has been lost.

This selection provided balance between pacing and development time, and allowed for a diverse selection of game mechanic once integrated with the plugin. Also included was a 'navigation' tool where players solve music-based riddles to unlock levels, though the efficacy of reusing this component is still in consideration.

Conversations with students during our testing phase for the minigame candidates revealed that the programming requirements lessened by the plugin made it possible for students as well as their teachers to pursue remixing minigames. This directed plugin development to allow students or others to draw artwork and write content for minigames using paper packets that provide guidance on requirements like image proportion and character poses (See Appendix A). Art from the packets can be scanned in and cropped to replace artwork in the existing version, which means students would not necessarily need to have a baseline digital proficiency to create a game, provided an instructor was present to process the material.
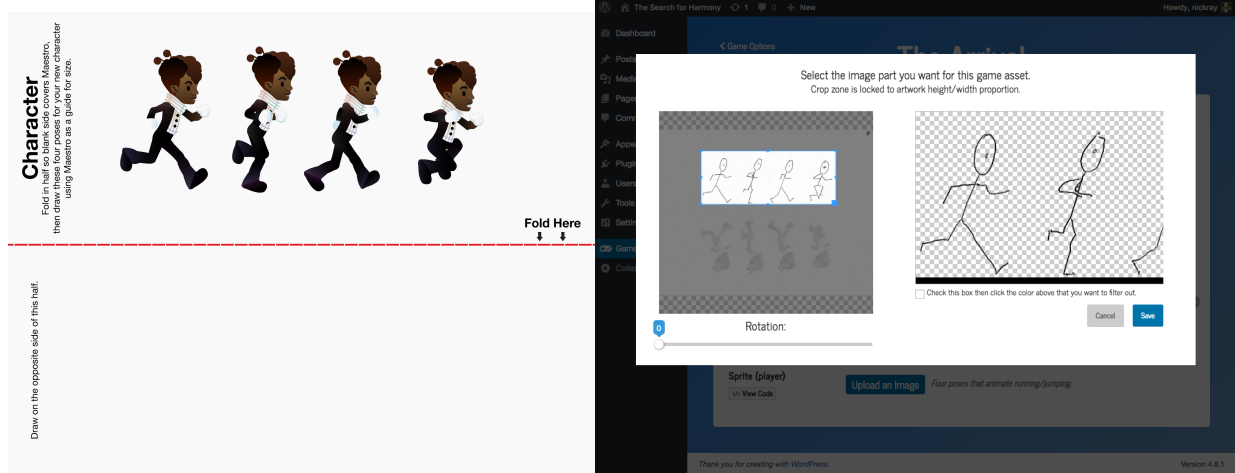
Left: A sample page from a Bridge Runner packet. Creators fold the paper over and use the existing character underneath as a guide for drawing each pose. **Right**: The WordPress plugin filters out the paper creating a transparent sprite suitable for gameplay. Creators can crop the scanned paper to cover all four poses and also align them with the floor to help avoid hovering characters.

Through this system, teachers could assign students the task of selecting a minigame that represents content they have learned, and produce writing and sketches that helps frame that content in the context of gameplay. Consider a civics student turning The Arrival (run/jump/collect) into a discussion of election politics, swapping out the platforms for issues and the notes for ballots. The next level (memory game) could explain that candidates must visit with people from all over the country and why, and each button could represent a state or district they need to remember to visit in order to win. The last level (Bridge to Another World) could be a race to the finish on election day with each line of collected objects representing a different swing state and voters. This example is anecdotal but it does highlight an area of study this project could help explore: The effect on learning via game production for the creator.

Since the required proficiencies are lowered to produce games (programming/digital artistry), a future catalog of minigames associated with this plugin would empower

students and educators to make game design decisions based on what best suits content rather than programming ability.

The packet created during this grant phase is planned to be used in future exercises with BUMP: The Triangle, which should provide further insight into how this approach could be tailored as a useful humanities learning activity. We will also continue to test the developing minigames with other educators and classrooms, including the Phoenix School, the Sphinx Organization and the American University Game Lab.

Outreach efforts during the grant phase, beyond collaboration with core constituencies, included a blog entry for the International Digital Media Arts Association[1], and social media outreach and updates through Facebook and Twitter to those following the project, as well as networking at the 2017 Games for Change Festival.

ACCOMPLISHMENTS:
From a technology and development viewpoint, goals established in the grant application were met and in some cases exceeded. The primary aim of producing a WordPress plugin that facilitated game creation was achieved, and features building on this milestone (tools for cropping and creating transparent imagery) further help to lower the barrier of entry for those who would wish to create educational games. In terms of audience, the initial focus on educators creating games for students to play has since expanded to include students creating games as an educational activity and potential demonstration of comprehension.

Concurrent with final development, a field study was conducted to investigate what other tools existed in the space *The Search for Harmony* has entered with the plugin, what benefits those tools provide that the current software does not, and what limitations exist that the plugin could help address. The primary software referenced by others in this area was Twine, which is a tool that facilitates the creation of interactive narratives (similar tools also exist). Twine's maturity makes it an excellent, reliable tool for introducing students to story development and interactivity. Our space, though similar, focuses more on the creation of multiple types of games for humanities presentation than an emphasis on interactive, non-linear stories, so an exact comparison cannot be drawn. However, one notable limitation of Twine that *The Search for Harmony* addresses is that of collaboration. Twine (as of this writing) saves projects in the browser, but not on a remote server.[2] This means that for students to collaborate on a project, they must share the same browser, or download the code and collaborate with those exported files. The latter option would

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[1] http://www.idmaajournal.org/2016/04/empowering-makers-with-the-search-for-harmony/
[2] http://twinery.org/wiki/twine2:where_your_stories_are_saved

require students to be familiar with web languages relevant to modifying the project. *The Search for Harmony*, by nature of being a WordPress plugin, benefits from the collaborative design of WordPress. Specifically, that game projects could be started by one student and modified by another, without the need to download code, and from any device with internet connectivity. What this research also provided was the beginnings of a network of educators open to using digital tools in the classroom, which may provide greater exposure for the WordPress tool in the long-term.

Though the tool itself was able to iterate and grow during the grant period, testing of the tool during this time was limited, due to the timing of shifts in scope and the development time involved in the larger scope. The initial plan called for testing of the test case game and tool in early 2017, and though the game was played and feedback provided in spring 2017, the intended environment for testing the efficacy of the plugin will now occur when students return to their programs this fall. This delay is not viewed as a setback, however, as the shift in scope also opened new potential audiences for the final product. In light of the expanded audience to include students, BUMP: The Triangle plans to test the paper packets as part of their curriculum, and other partnerships are being explored to provide a testing audience for the plugin, so it can be further improved and used in the field.

AUDIENCE:
The project's primary audience includes educators and educational organization leaders with an interest in producing humanities games for their students. Our core constituencies were able to provide feedback during early development, though during the grant period for this phase of the project the completed tool was not sufficiently mature to test in the field. Future trainings and demonstrations with researched educators interested in using digital tools may yield a larger audience of interested parties and potential users.

A secondary audience was established during the development of the plugin. The pilot game exploring George Bridgetower was designed to target students between grades six and nine, and having students from The Phoenix School play through this version made it clear that students, from a production viewpoint, could also create games using this tool. Since both primary and secondary parties would benefit from streamlining the game creation process, efforts were made in the later stages of development to accommodate both, resulting in the aforementioned paper packet approach. Use of the paper packets also expands the audience to include educators and students in underserved communities who may not have sufficient technology access to create games directly, but have access to basic materials to produce content that a facilitator could scan and use to create the digital work on their behalf.

A tertiary audience for the tool came not from direct play testing, but rather through

considered feedback from the project advisors, the development team, and an environmental study comparing other tools. What *The Search for Harmony* as a plugin provides to its audience is abstraction from code into simple controls, so focus can remain on the content and context of each experience, allowing the game mechanic itself to serve as the content vehicle and not as an obstacle to creation. The drawback to this approach, however, is that audience members who develop an appreciation for game design through the tool would not easily be able to 'peer behind the curtain' to look at the source code to understand how the game mechanic itself works.

To address this concern and open a new opportunity for learning, the plugin was modified to include the ability to view the source code for any minigame integrated in the system, as well as establish a standard for code commenting so future users could recognize how the game works. For most adjustable controls in each minigame, there is a button to "View Code" which will display a popup box with the code for the current minigame being modified. Inline comments provide explanation for what each line of code does and, when possible, references to online resources could be included.
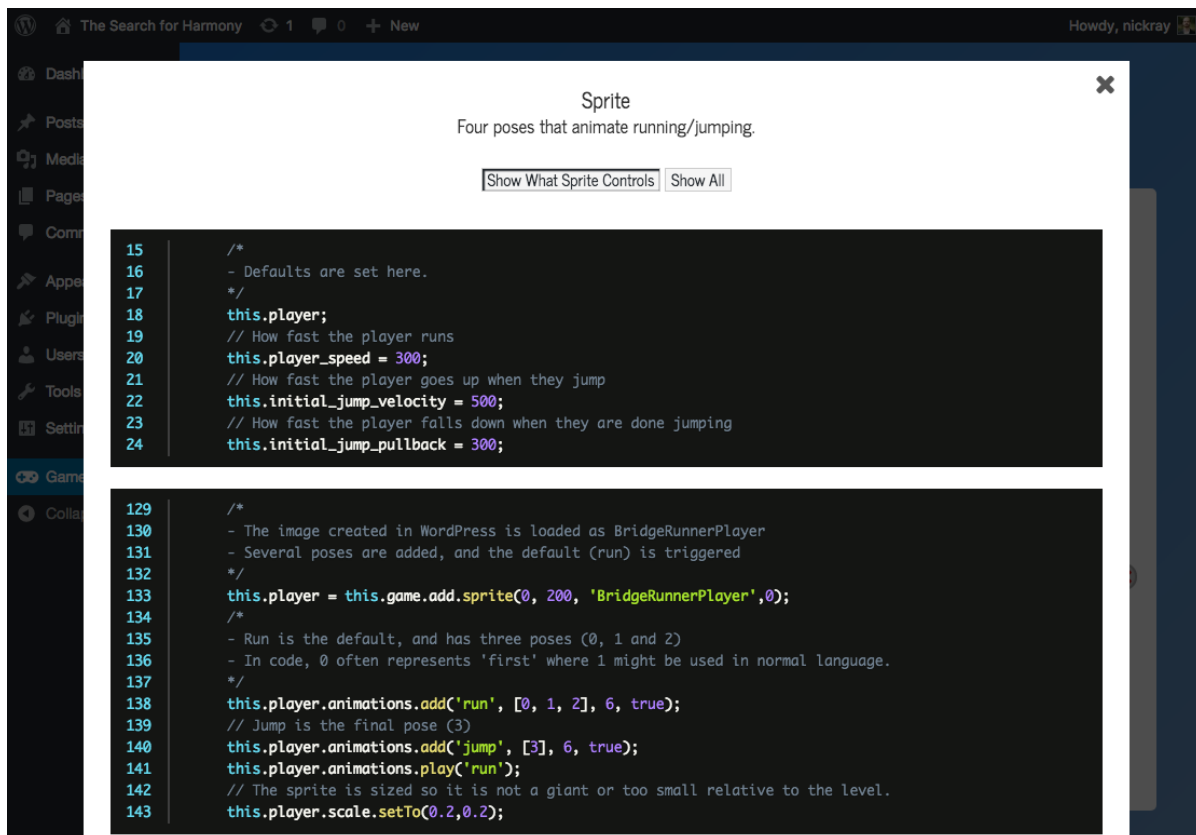
Users have the option of viewing the entire Javascript file that powers the minigame (with relevant parts highlighted), or to view only the excerpts that are pertinent to the control they are adjusting.

Future iterations on the plugin could provide spaces for students to modify code, if testing

with audiences demonstrates that need. What this approach does, however, is ensure that while the ability to produce games does not require knowledge of programming, the ability to see how the game is built remains for those who wish to learn it.

Though each mentioned audience has specific needs, future iterations of the plugin will seek overlap to help empower not only those who use games as a vehicle for education, but those who seek to learn the craft as well.

EVALUATION:
The project team stressed the importance of evaluation from the very beginning of the development process, not only from potential constituents, but also from our stable of advisors. Throughout the different stages of development, brain trust meetings would cover the latest progress and the educational philosophies that informed it. In fact, it was an early evaluation of our initial plan for the plugin that prompted the project team to rethink the use of this project, ultimately leading to a tool that will provide greater flexibility and usability for teachers of diverse disciplines.

At key stages, the project team approached project partners and individual students to review the work to date and provide constructive feedback. The Phoenix School provided the greatest contribution to feedback, in particular students highlighting which minigames were engaging from the initial selection and which were not. While students did enjoy The Arrival (run/jump/collect), the least engaging was Gateway to Another World, which required players to make use of an external resource to obtain a numeric code. The idea behind this minigame was to allow flexibility on the part of the educator during playthrough, but the forced reliance on a third-party to progress was not as well-received as other minigames. Educators, however, see more value to that same minigame as it enables them to bring in more context and detail to the humanities content already featured in the minigame.

From the perspective of project directors, the largest challenge during the grant period was that of a shifting core scope that delayed other pursuits, whether due to crucial feedback from advisors, meeting with core constituencies, or uncovered opportunities to further engage users. Though the construction of the tool itself is considered a success, the effectiveness of creating educational games with this tool will not be meaningfully tested until this coming fall. The original plan for testing was to utilize students during the spring semester of the academic year to experiment with a rough version of the tool. The aforementioned delay pushed completion of the first version of the plugin into a timeframe incompatible with the academic calendar, which limited that option. Future tests are already planned using the paper packets with students to remix Bridge Runner and test the software, but as of the writing of this White Paper, the primary demonstration of minigame

capabilities remains with the pilot game exploring George Bridgetower.

CONTINUATION OF THE PROJECT:
The ultimate goal of the WordPress plugin for creating educational games is to lower the bar for creators to produce games that inform and inspire. Though the plugin has provided an ability to produce the same type of minigame without knowledge of code, further barriers were realized that will be addressed in future development, most notably that use of the plugin requires access to a WordPress installation and being able to install a plugin.

One reason Twine and tools like it are successful is that they provide an out of the box platform game creators can use without installing software or obtaining web hosting. Having a centralized platform to generate work allows for casual experimentation as well as robust development. Adoption of *The Search for Harmony* as a plugin will be challenged by audiences who have limited access to a self-hosted WordPress site.

With WordPress as *The Search for Harmony*'s content management system, options are available to overcome this remaining technology barrier to remixing games, and will also improve on experiences like those provided by Twine. For the initial grant phase, the plugin has been developed and can be accessed and installed from the web. Future plans include developing and providing a hosted version, which will eliminate the need to download and install the plugin.

WordPress contains a feature called Multisite, which allows users to sign up and create their own sites, all of which utilize the same underlying software and would thus allow access to the plugin capabilities without having to install their own copy of WordPress. WordPress.com is one example; Edublogs is another platform more specific to our audience.

The Search for Harmony could evolve into a platform with the following characteristics:

- Different audiences can sign up and create their own website on the platform without installing software. A class or school could create one account, while an after school club could create another. Core constituencies could choose to create one account per organization or one account per summer camp. Self-directed learners could create their own site as well

- Following account creation, users can create games that consist of one or more minigames, and order them as needed for the content

- The platform provides what will become an ever-expanding catalogue of minigames that have been built to be remixed, limited only by what is possible with Phaser.js. The greater number of minigames that are included, the more likely a game creator will find game mechanics that are most relevant to their content. This ecosystem also allows for greater varieties of games to be produced

- A communication method through which new minigames could be requested based on needs of educators or students covering content areas not yet considered

- WordPress stores produced games on the platform, so they can be edited from any device, self-published, and multiple users can collaborate on the same project

- Features not part of the plugin but that reinforce effectiveness can be installed. For example, several plugins exist for search engine optimization, which would help games and organizations be found more easily, if that was the goal

- An ability to embed games produced on the platform on another site, similar to how video content providers like YouTube do so now

The current development model of the plugin would support a migration to this type of infrastructure. Plans for immediate progression of the plugin include continued development to increase the number of controls for minigames, create the ability to select an index screen as a main menu, and share the plugin for public feedback, both through direct use and through the aforementioned paper packet approach for students with limited access to technology.

One takeaway from research into tools like Twine is also the planned ability for a game creator to export their game, should they decide to host it outside of the platform or, what is more likely, work with a developer to make code modifications to the game that the plugin does not currently enable.

This grant phase served to reinforce partnerships established at the outset of the project, and there is interest from these groups to continue collaboration. Contacts collected as a function of Twine research will also be pursued to expand the network of potential users.

LONG TERM IMPACT:
The initial phase of *The Search for Harmony* explored multiple approaches to fostering game development for humanities content and identified a modular approach to plugin design that allows for more options to be created in the future. Our initial assessment of the need in humanities for more accessible game production on the part of the educator is still

one that can be fulfilled with this tool, as the digital proficiencies required (once the plugin is installed) are limited to concepts related to content management systems, without code requirements. Though it is possible some educators will use this as a starting point for their designs and later work with a developer to further refine the game, the tool that continues to evolve opens doors for educators to produce certain types of games for students that can help reinforce educational content.

This tool could also contribute to research involving how creating games reinforces educational content for the creator, as students using the tool may derive a deeper understanding of their content domain as a function of producing the work. One feature of many games for education is that knowledge serving long-term, nebulous goals can be situated as serving a short-term clear goal within the game. *Where in the World is Carmen Sandiego* is one anecdotal example, as students must research information as a function of winning the game, which is an incentive if the game is itself engaging. The learning is a means to the gameplay end, but is ancillary knowledge that can remain once the game is completed.

A similar model has been explored with projects like *Place Out of Time[3]*, in which students represent different historical figures participating in a debate. To meet the short-term goal of representing their subject as accurately as possible (and to be successful in the debate), students have an incentive to do independent research beyond cursory knowledge of their subject. *The Search for Harmony* could provide learning opportunities in a similar way: A group of students who are all assigned the novel task of making an educational minigame around different concepts may be incentivized to make their game the strongest, encouraging further research as a function of project completion not unlike efforts to produce the best project at a science fair.

One final area worth mentioning is the potential for minigames in an expanding catalogue to serve as a means of expression. *Dys4ia*, by Anna Anthropy, is a 'journal game' that presents different microgames to the player, representing challenges and successes during six months of hormone replacement therapy.[4] Though some of the tasks in the experience are tailored to the situation, others are abstractions of other games that have relevant meaning to this expression. Navigating a maze, blocking projectiles with a shield, flying through hoops, and breaking through a wall with a projectile are just a few examples of minigames that are used in *Dys4ia* but could be repurposed in other contexts. By removing many of the programming barriers to using minigames as a means of expression, the project does not intend to replace the need for custom development. Rather, the long term

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[3] http://ics.soe.umich.edu/main/section/5
[4] https://w.itch.io/dys4ia

impact in this area may be simply providing another avenue for expression that requisite programming skills have in the past made inaccessible.

Given the potential and positive feedback provided by core constituencies, there is strong incentive to expand the scope of the plugin through the addition of more minigames and providing a hosted option should resources allow.

GRANT PRODUCTS:

The two primary grant products are:

- *The Search for Harmony* test case game about George Bridgetower, which can currently be played online here: http://beta.searchforharmony.org/full-game/ Source code on GitHub: https://searchforharmony.org/game-source

- The plugin, which has been published on GitHub, and with the goal of also including it in the WordPress plugin repository: https://searchforharmony.org/plugin

Additionally, as part of building a foundation for its audience engagement campaign, the project team has already created the following element:

- Landing page for *The Search for Harmony*: https://searchforharmony.org/
- Facebook page for *The Search for Harmony*: facebook.com/searchforharmony
- Twitter handle for *The Search for Harmony*: @search4harmony
- Promotional postcard for *The Search for Harmony* (see Appendix G)

APPENDIX A

Paper Packet and Remix Instructions

Includes:

1. Student Activity Overview
2. Paper Packet for Bridgerunner
3. "How to Make a Maestro Sprite"

Project Maestro Student Activity

Overview:
Project Maestro is a WordPress plugin that allows students to look at a catalog of minigames, pick one relevant to a topic they are studying, draw and scan in artwork and change text content, and produce a version of the minigame tailored to their topic. This process allows students to be creative while encouraging them to think critically about what they are learning in order to justify their choice of minigame, and only requires drawing supplies, a pen or pencil, and a facilitator with a computer, scanner, and internet access.

Goal:
Each student group (3-4) will be able to pick a minigame to remix based on their topic, e.g. music in a region of Africa. Right now there are only three mingames available (original versions are The Arrival, Melody Memory and Bridge to Another World in *The Search for Harmony*, most students will likely want to do The Arrival*).* They will receive a printed packet with pages including space for writing introduction text and victory text (background information about the topic), and pages that are rectangles of varying sizes representing different game assets. There is a third type of sheet for minigames where there is a moving character, so students can design their own if they wish.

After drawing the art and writing short text about the topic, these packets can be scanned in and emailed to the facilitator (in this case, Stone Soup Productions), who will manage loading the art and text into the related minigame. The plugin will remove the white paper background where needed so students can use any material to create art that won't harm a scanner.

A few days later in the program students can play the minigames using their art and text to see what everyone made!

Time Requirement:
2-3 hours (an afternoon or so), depending on what topic the students want to cover and how much research (if any) is involved, and also how much time you wish to allow for art creation.

THE SEARCH FOR HARMONY

a web-based game by Stone Soup Productions

Helpful Links

How to create a Maestro:
https://docs.google.com/document/d/1Zfm9AjmFVsDKwLXxVWdNSt3hZRoruMAovmsySmw9LR8/edit?usp=sharing

Demo:
https://www.youtube.com/watch?v=KNbO3oA1jZg

To view the three minigames, go here and click the title:
http://beta.searchforharmony.org/full-game/?level=4&unlocked=true

One Pager for *The Search for Harmony:*
https://docs.google.com/document/d/1L0TGrzllU94ZvQXOk5G0KqPS9jzjHahaWEZZ5CgPX0c/edit?usp=sharing

Contact:

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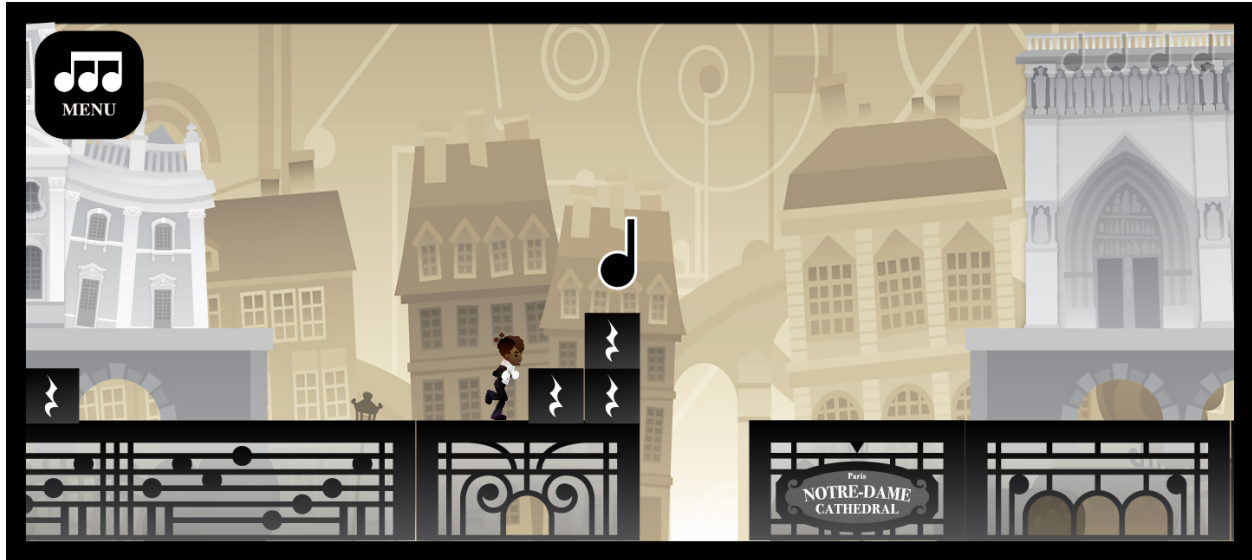
Project Maestro Game Remix Packet
Bridge Runner

Draw artwork and write text - make your own game!

Gameplay:

Character runs to the right and collects objects, avoiding pits. When all objects are collected, the game is won.

Instructions:

Complete content for all pages in this packet and give to your instructor to scan and enter.

Try to make a game that tells your classmates/friends/family something you have learned about the topic you are studying, or that interests you.

Helpful Notes

For the collectibles:

Think of an item related to the topic you are studying.
A few examples:
An election might have votes/ballots.
Music may have an instrument like a drum.
Music could also have a few different instruments.
Biology could have a cell.
Geography could have states or countries.
Sports could have bats/ball/nets.

Can it be broken down into parts?
Pieces of a drum, parts of a cell.
These different pieces could be what you draw/collect.

Could there be more than one of the same item?
Like in the sample game, *The Search for Harmony,* there are several music notes that are collected but are all the same.

For the obstacle:

Think of a tool, event, or other object that might help your character reach the collectibles.
A few examples:
A scientist could jump on a microscope to reach the cells.
A politician could jump on issues to reach ballots.
A musician could jump on notes to reach instruments.
A musician could also jump on rests, like in *The Search for Harmony.*
A geographer could jump on a vehicle to reach different states,
or a compass.
An athlete could jump on a hurdle.

For the platforms & background:
Whatever helps to set the stage. A city? A forest? A gymnasium?

For The Character:
Any person or creature you want to make!
An explorer, an artist, a musician, a spy, whatever
makes sense for the rest of your art.

Help (Beginning) Text

Game Title: _____

Help Text:
Remember to include how this game relates to your topic.
Where is the space we are running through? When?

Gameplay instructions to include at the end:
Use the spacebar to jump and collect (or touch the screen on touch-enabled devices).

Victory Text

Victory Title: _____

Examples: You did it! Way to go!

Victory Text:
What did our player collect?
How are these items important to your topic?

Background

Your Art
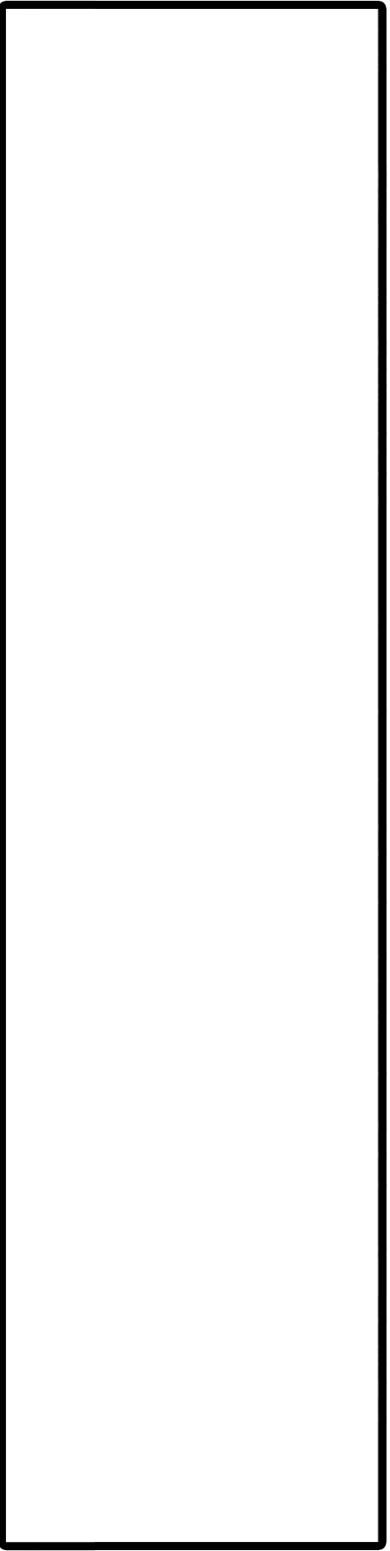
Default Art

Draw on the opposite side of this half.

Character

Fold in half so blank side covers Maestro,
then draw these four poses for your new character
using Maestro as a guide for size.
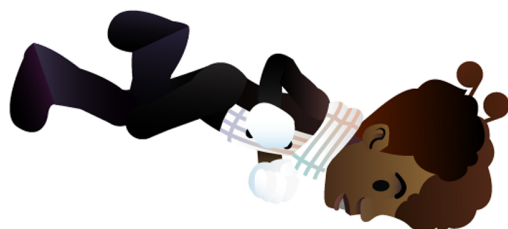
Fold Here
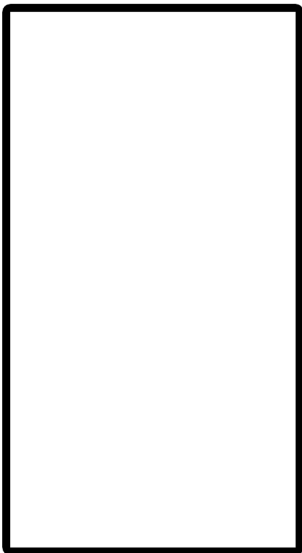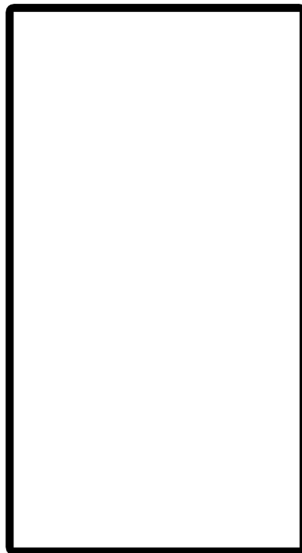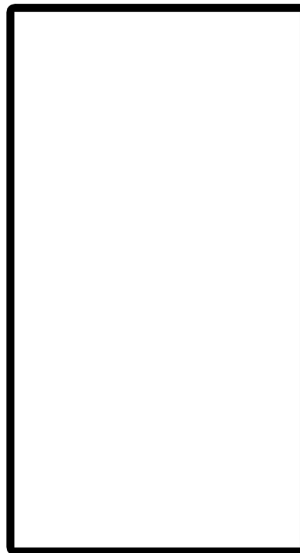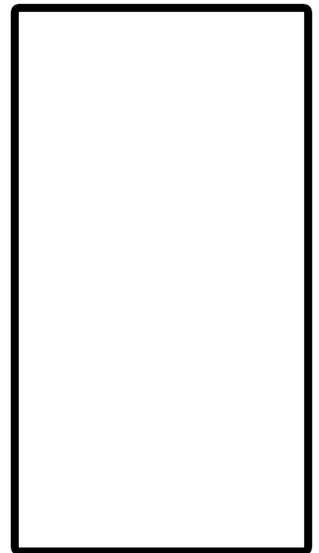
Collectibles
(draw up to 4)

Default Art

Your Art

Obstacle

Default Art

Your Art
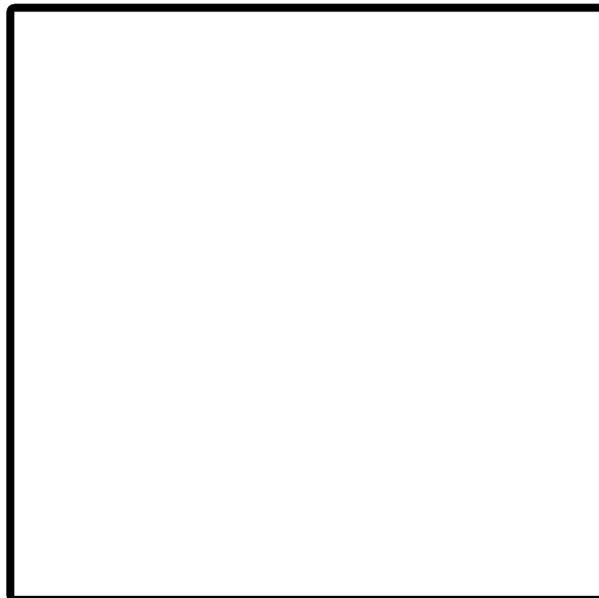
Platforms

Default Art
(only one is required, draw up to 6)

Your Art

Menu Button
(optional)

Default Art

Your Art
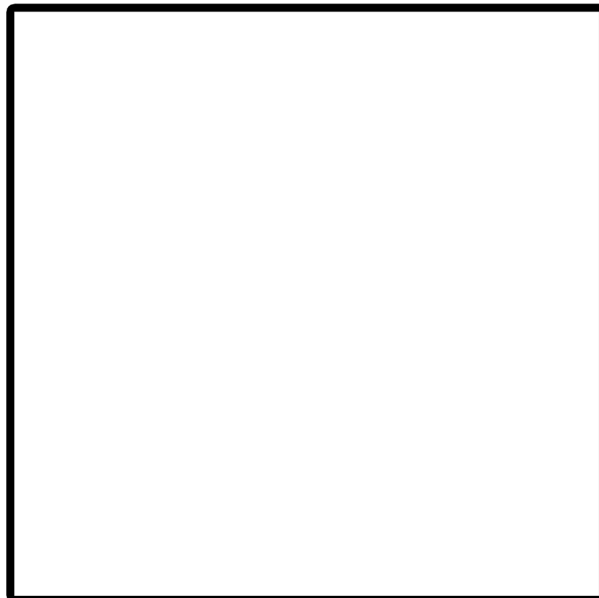
How to Make a Maestro

In 7 easy steps
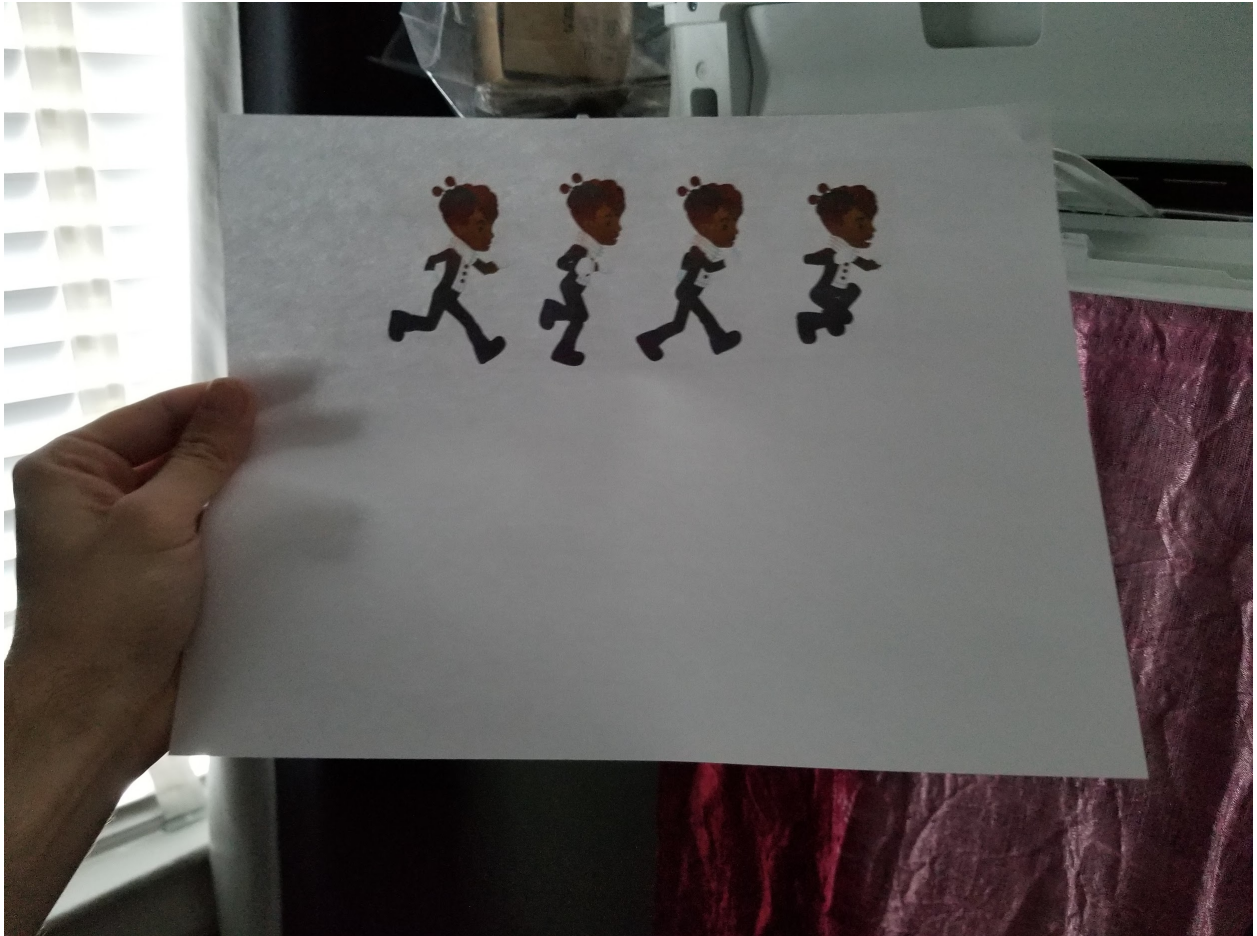
Step 1: Print out the provided template for the minigame you want to make art for. This example is for minigame type "Bridge Runner"

Step 2: Fold the paper in half so Maestro is 'sandwiched' in the middle.
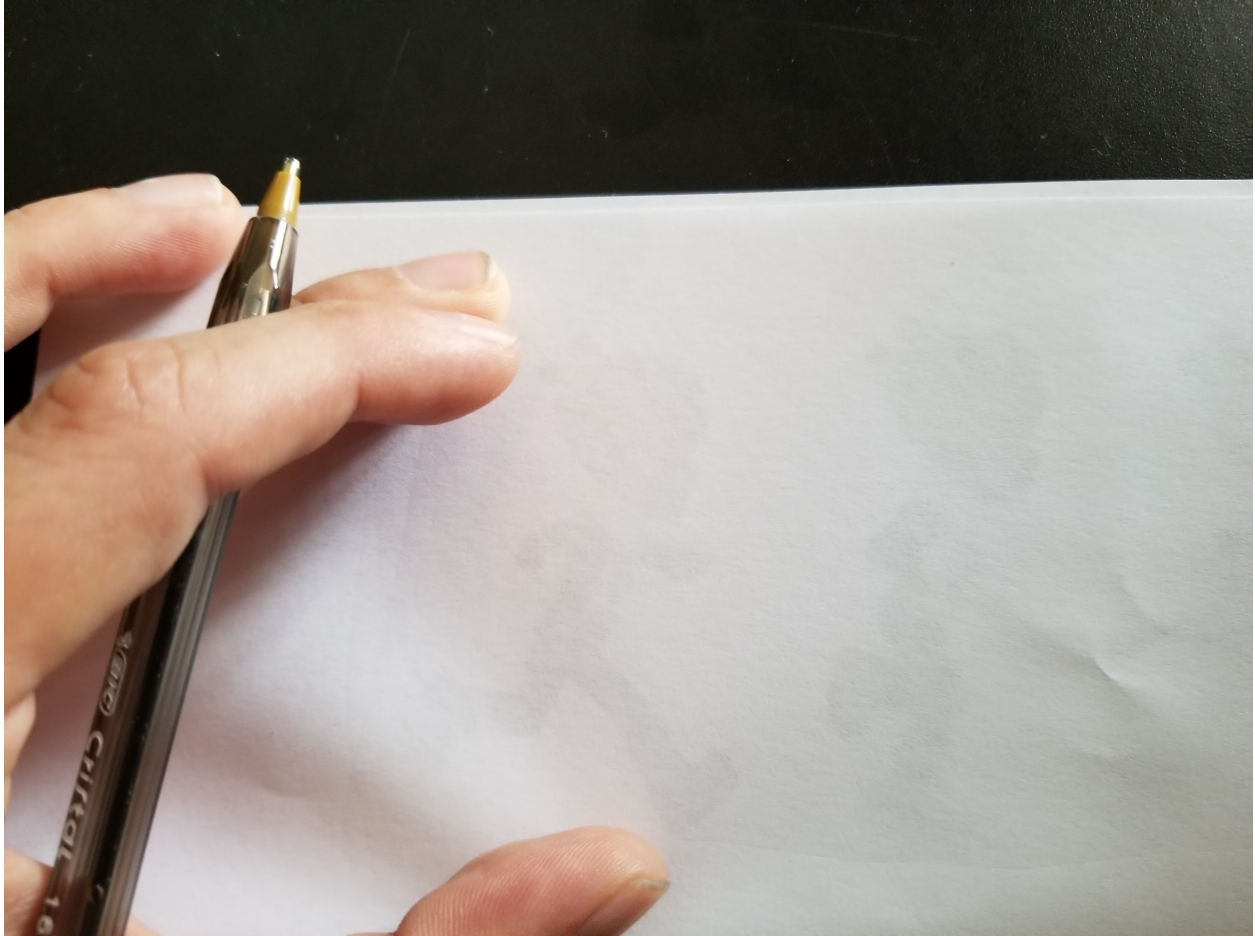
Step 3: Using the shadow of Maestro underneath as a guide, draw a new character for each pose.

The trick here is to make sure the bottom of your character e.g. feet (if it has feet) lines up with Maestro's.

Pick a bright area so you can more easily see through the paper.
If your classroom has an overhead projector, even better.

You should aim to draw a character that does not stray further to the right or left of each Maestro pose, or it may be cut off in the game!
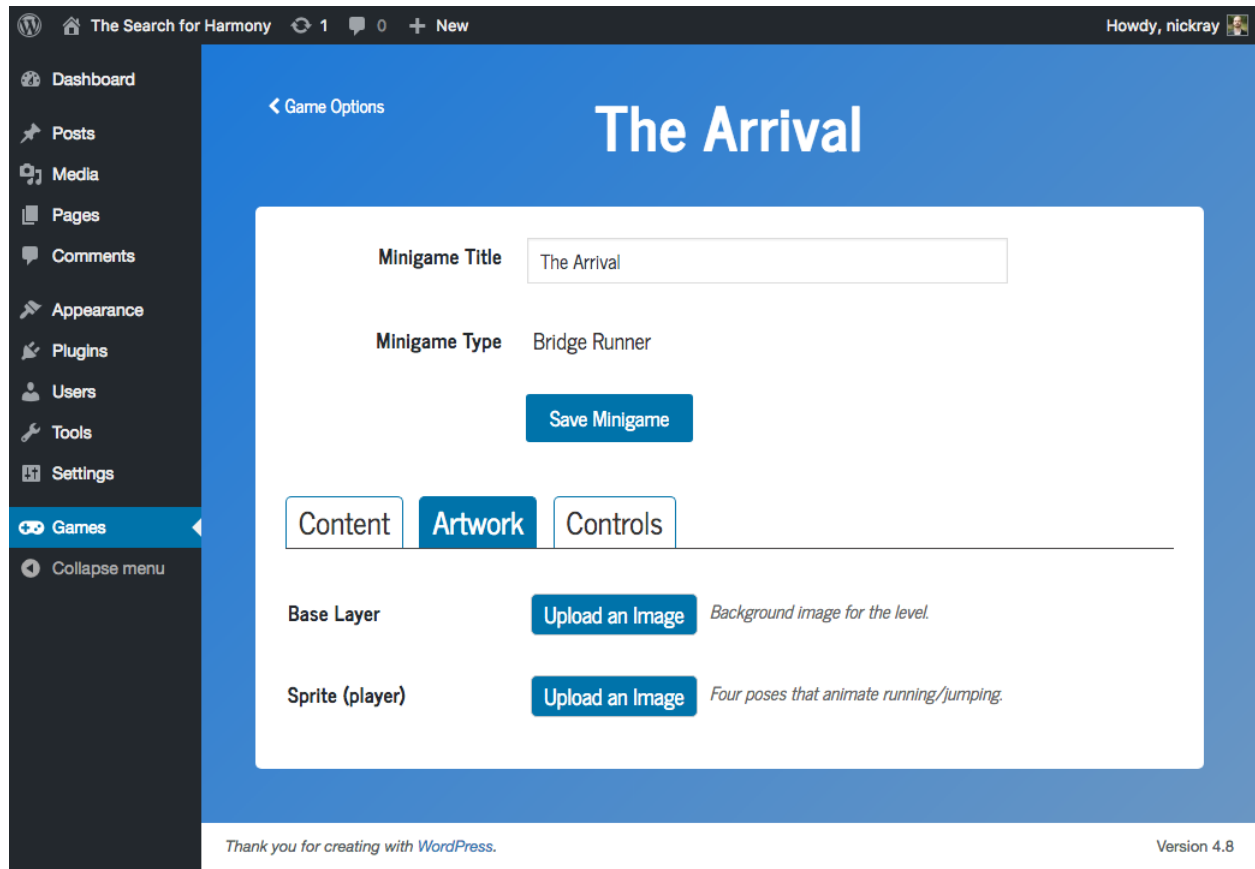
Avoid using a color similar to the color of your paper (e.g. white).
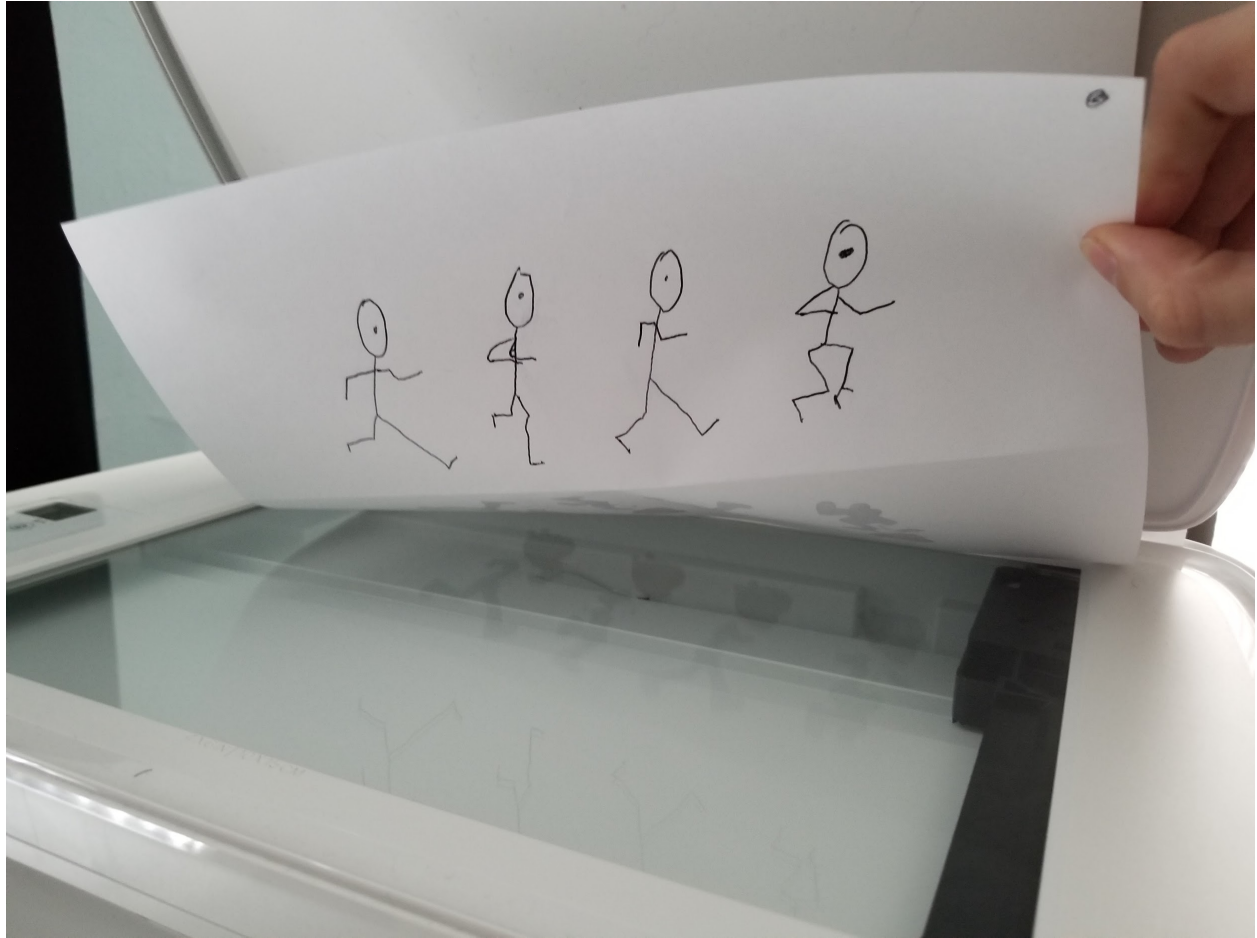
Step 4: Unfold the paper and scan it into your computer, making sure that your art is face down on the glass.
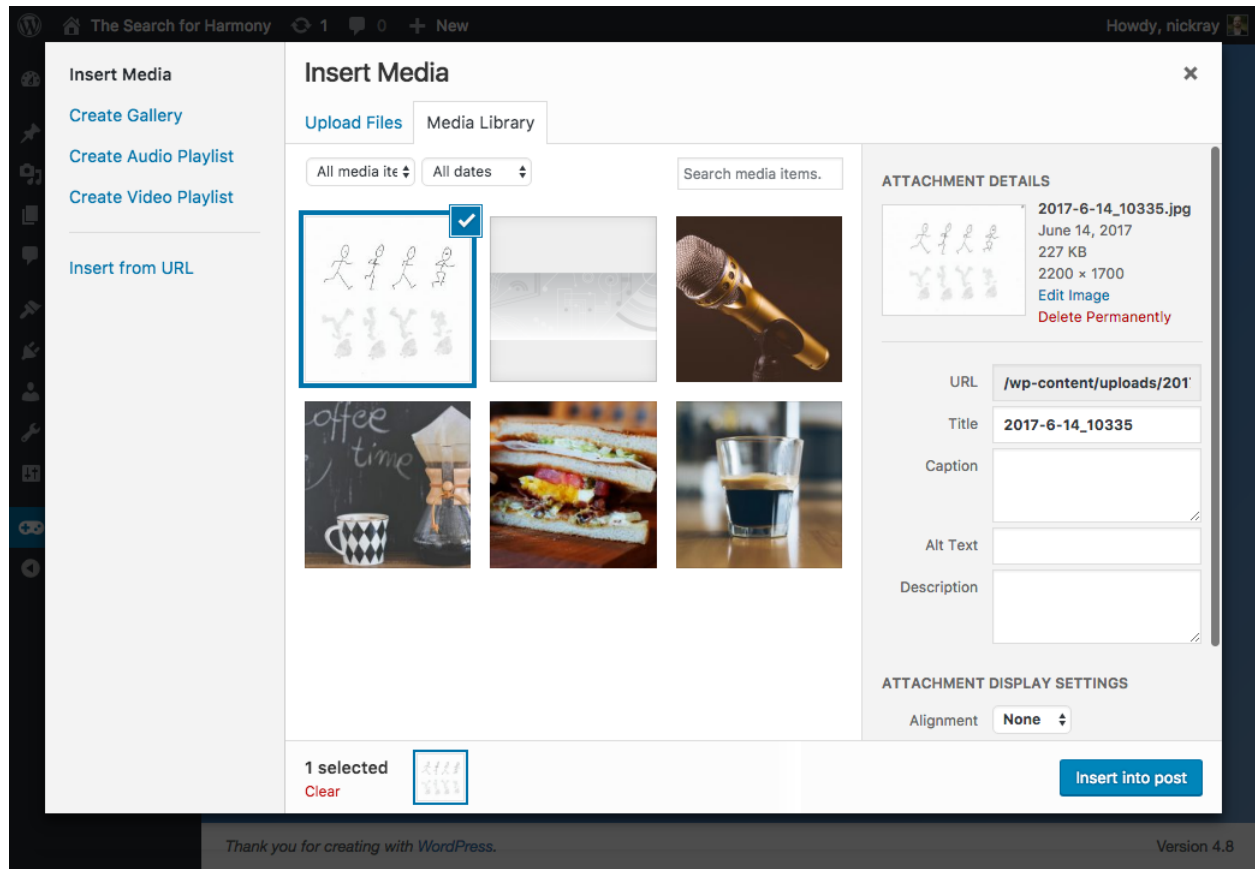
If you used marker, make sure the ink is dry first!

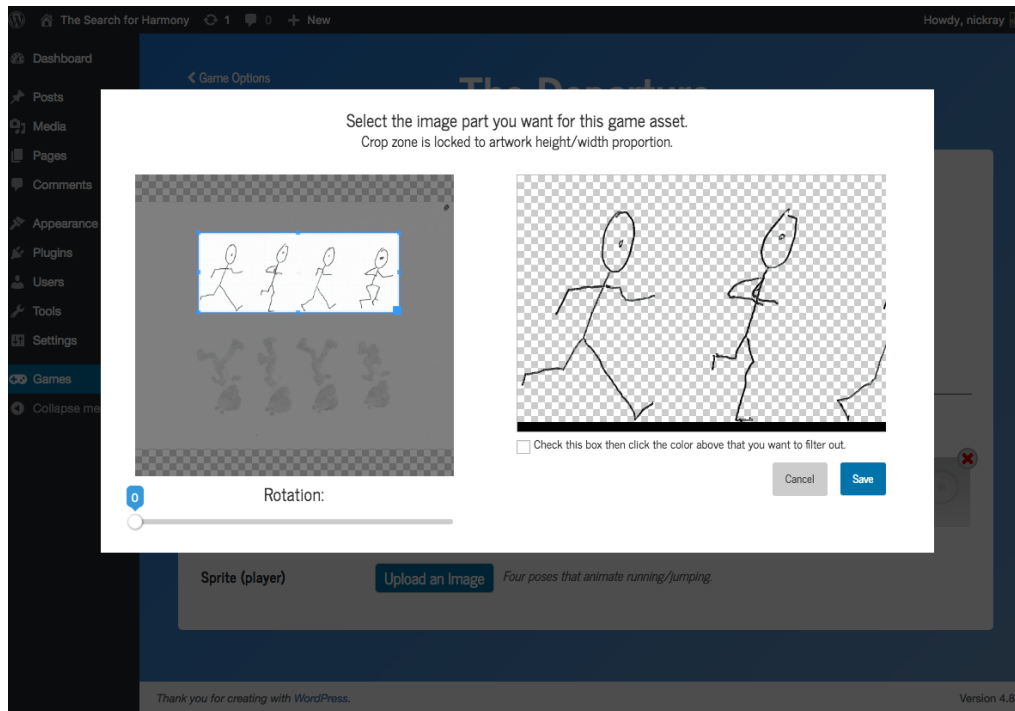Make sure the scan is saved as a JPG (not PDF).

Step 5: Navigate to the minigame in WordPress.

If you haven't created the minigame yet, click "Add New Minigame" on the Game Options screen, choose the minigame you have art for, give it a name, and click "Make it Happen!"

Step 6: Upload and select
the scanned image

Step 7: Move and resize the box on the left so it covers your four poses.

The black bar on the right image represents the floor, so you can line up your character's feet (if it has feet). This will not be in the final image.

The left and right sides should have no space
between your art and the edge.

This crop tool also removes near-white colors (e.g. the paper) so your character won't have a white background when it is running.
If you want to use white, draw on a non-white piece of paper and check the box on the right, then click on the color in the image above the checkbox that you want to filter out.

When you are finished, click "Save" and a PNG in the correct dimensions will be loaded into your minigame. Make sure to save. Great work!